

COORDINATING HIGHWAY IMPROVEMENTS WITH
MILITARY NEEDS

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America stands face to face with a turning point in world history. New names, new governments, and new philosophies command the daily headlines. The leading nations in Europe are engaged in a death-gripping struggle to determine what form of government shall rule Europe and possibly spread its influence over the rest of the world. Just how far it will be our lot here in the United States of America to enter into the European struggle no one is definitely prepared to say. We do know, however, that we are now engaged in a gigantic program of preparedness. It is, of course, hoped that this program will enable us to avoid the actual conflict of war. On the other hand, however, our preparedness program should be a complete one, so that if the time should come when we must engage in hostilities our preparedness will be complete and not missing in some of its important elements.

The speed of our daily life has tremendously increased during the past quarter century. Science and engineering skill have produced timesaving devices that have affected all of us and have shaped our pleasure and our commercial and industrial trends. Foremost among thousands of modern scientific achievements is America's gift to civilization—the automobile. Its development brought along with it innumerable supplementary pursuits, one of the greatest of which is highway construction.

Road building has sparked America's standard of living to the lead post over the other nations of the world. When we reached the limitations of our primitive routes of commerce, we turned to roads and performed miracles by opening up more productive areas and rejuvenating forgotten commercial centers. Highways have served America well in her peacetime pursuits. They must now be able to serve her to the utmost at a time when we seem to be facing a grave danger.

We own the world's most extensive network of highways; but it is inadequate for absolute national defense. Roads have always played a major role in military history. Today, however, their importance is far greater than ever before. Today, the army and all of its elements move on wheels, and experience and observations prove to us that it moves very fast. We need only to look at the lightning-like thrusts made by the German forces over their military roads in comparison with

the bogging down which occurred in some of the European countries not adequately served with highways.

DEFENSE HIGHWAY NEEDS

An appraisal of our defense highway assets shows that we have certain definite needs which might be grouped into three general classifications as follows:

The construction of adequate roads leading into military camps and bases. These are needed now to provide for the movement of men and supplies into and out of the areas.

There is also the problem of improving the highway facilities in the areas occupied by large industrial plants that are engaged in war orders or in orders resulting from the general step-up in production.

The other great problem is that of improving the strategic network to military requirements so as to enable the movement of materials and supplies being used in the preparedness program, and to provide for the rapid and adequate handling of troop movements, together with equipment, supplies, food-stuffs, etc., during a time of actual war.

In the first of these requirements the needs are caused almost entirely by the training program for troops. Such roads have very little significance other than military.

The second type, that of improvement of roads in the industrial areas, in many cases provides improvements that are of a distinct commercial value but in a number of cases are made necessary at this time principally because of the increased industrial program resulting from the manufacture of war equipment and supplies.

The third group is made up of a great mileage of roads that have established their commercial importance and should be considered both from the standpoint of the commercial and the military assets which they would provide. Some of them are very important for both purposes and would be in line for improvement under normal programs. Others are important from both standpoints but perhaps not so vital from a commercial standpoint as are some of the roads not on the strategic network.

SOLUTION OF PROBLEM

In approaching a solution to this problem, particularly the financing of it, we should consider needs both from the military and the commercial standpoint and justify the expenditures on that basis. Almost untold sums of money are being spent for implements of war and for adequate defense should war be carried into this country. Modern war is carried on in the air, on the sea, and on land. We know that the mobility and effectiveness of the present-day equipment depend largely

on the condition of the highways in the fields of operation. But this is only a part of the need for highways.

It can be readily proved that highways that serve essential military purposes also serve equally important commercial purposes. A war of invasion always strikes at the important industrial and shipping centers as well as at a nation's sources of materials and supplies. Even if such points are not immediately accessible, they are always the ultimate military objectives. This means that the areas where the population is the greatest will be the most seriously affected. Such areas have the greatest need for military highways, and likewise they have the most need for commercial roads.

It follows that roads are needed not only for the movement of troops and equipment in areas under attack, but that there is the equally important need for the rapid and uninterrupted movement of materials, supplies, and food from the areas in which they are produced.

In the United States there is a heavy concentration of population and industries along the seaboard; but we also have large industrial centers inland. Our raw products and food supplies are largely produced inland. Consequently, the location of roads for military needs is naturally where there is the need for commercial purposes. There is the additional problem of the evacuation of civilians from the areas under attack. Where there are sufficient roads, certain ones may be used for the forward movement of troops and supplies, and others, perhaps of less importance, may be used for evacuation purposes.

No one can justly criticize a nation for spending adequately for defense purposes. Vast amounts of such expenditures are for purely military needs which have no tangible peace-time commercial value. If such expenditures can prepare a nation so that war can be averted, or so that a war may be won, they will have served an all-important purpose.

In the case of highways we build facilities that serve military and commercial purposes alike. Definite and tangible benefits are derived from them every day whether we are at war or at peace. I seriously doubt if we in the United States think of highways in this light. When we spend for aeroplanes, tanks, guns, and battleships, we do so without restraint because we fully realize that such equipment is purely for military purposes and the thoughts of war strike us so hard we spare nothing in preparing for it. But when we think of highways, we are talking about something that we use in our everyday life, and we do not consider them as military needs in the same manner as we think of other strictly military items.

It is natural that it is difficult for us to conceive that there is anything which serves us equally well in peace as in war. I wonder if we should not talk about the building of highways

as an investment rather than an expenditure, and if we should not think of the benefits received from such investments from a commercial standpoint, and only along with it of the vital importance of the highways as an element of a military or war machine.

Undoubtedly the greater part of federal aid for highways, together with a considerable amount of the states' funds, will be expended in the coming year on defense roads. It would seem that certain ones needed principally for military needs and having little commercial significance should be paid for definitely as a part of the defense program, and not by the states. Others, which have a very important commercial value, can well be considered as a part of what might be normally programmed, and the states should be in a position to spend as much of their funds as they can possibly justify for such roads.

On the other hand, many of the states have urgent commercial needs for roads that do not happen to be designated as defense highways. Many of these roads are much more important and are much more in need of improvement than are some of those designated as defense highways. It would seem economically unsound to neglect such projects. This should present a strong argument for further appropriations by the Federal government for the purpose of building defense highways. Such appropriations should be reasonable in amount, but certainly they should be considered as being just as important to the defense program as are many of the other elements on which large expenditures are being made.

It would be out of the question to rebuild all of the sections of defense highways that probably might be desired. Certain sections of such roads might be brought up to reasonable standards without going into actual reconstruction or new construction. There are sections, however, which are definitely inadequate and should be relocated and constructed according to modern standards, with consideration to both the military and the commercial needs.

The problem is a big one. When we consider the facts that in 1900 there were only 8,000 motor vehicles registered in the United States, and that in 1939 this number had increased to over 32,000,000, and probably reached somewhere near 34,000,000 in 1940, we have some conception of the enormous growth of the motor-transport industry.

We must combine with this increase in numbers the increase in mileage driven by the individual motorist in order to get a more complete picture of motor travel. The manufacturer of the motor vehicle has improved his product to such an extent that each vehicle now is driven several times farther than the mileage of twenty years ago. The expansion of the highway system has in no way kept pace with the rapid development of the use of motor vehicles. Furthermore,

many of the roads which were adequately designed from ten to twenty years ago are now more or less outmoded and obsolete as a result of the increase in numbers and the perfection of the motor car itself.

All of this is extremely important from a commercial standpoint, but it likewise has developed the absolute and essential need for highways in any military operation, whether it be in the form of a preparedness program or engagements in actual war.

MILITARY DEMANDS ON OUR HIGHWAYS

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The War Department, in collaboration with the Public Roads Administration, has under continuing study the question of highways and national defense. Certain general principles are mutually agreed upon by the War Department and the Public Roads Administration as follows:

First, that the highways which must be constructed for commerce and national development will be identical, in general, with those required for military purposes.

Second, that the location of highways and the priorities of construction are matters for determination by the Public Roads Administration and the State Highway authorities concerned. This being the case, the War Department refrains from recommending specific highway routes except in the most critical circumstances.

Third, that a general network of good roads connecting important supply depots and mobilization and industrial centers, has more strategic value than transcontinental roads which merely cross the country from coast to coast or from north to south. In this connection, a system of high-standard roads connecting our principal centers of production with vital strategic areas has considerable commercial, as well as military, value.

Fourth, that the War Department's primary interest is to insure adequate highway facilities between important strategic points and vital areas.

The results of such studies are furnished by the War Department to the Public Roads Administration and I believe to your state highway departments in the form of Special Highway Maps which show highways of military importance. It should be noted that there are no military roads, as such, in the United States. Instead, the primary purpose of the Special